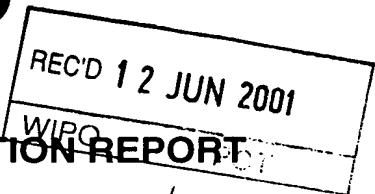


**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**



(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>CL1375PCT</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/US00/04105</b>	International filing date (day/month/year) <b>18/02/2000</b>	Priority date (day/month/year) <b>19/02/1999</b>
International Patent Classification (IPC) or national classification and IPC <b>C08K9/04</b>		
Applicant <b>E.I. DU PONT DE NEMOURS AND COMPANY et al.</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I     Basis of the report
- II     Priority
- III     Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV     Lack of unity of invention
- V     Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI     Certain documents cited
- VII     Certain defects in the international application
- VIII     Certain observations on the international application

Date of submission of the demand <b>30/08/2000</b>	Date of completion of this report <b>08.06.2001</b>
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer <b>Feldmann, G</b> Telephone No. +49 89 2399 8300



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/04105

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):  
**Description, pages:**

1-19                   as originally filed

**Claims, No.:**

1-17                   as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description,               pages:
- the claims,                   Nos.:
- the drawings,               sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/04105

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	1-17
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-17
Industrial applicability (IA)	Yes:	Claims	1-17
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US00/04105

- 1.) In the examples and comp. examples of the application mineral fillers are merely characterized by their trade names, the "aspect ratio" and the "equivalent spherical diameter" are not specified. Therefore, it is not clear, if the fillers fall under the definition of the fillers as presently claimed.

In Tables 4 and 6 the applicant proved that the particle size is of great importance to provide compositions with high Izod values. In Table 2 he proved that the treatment of the filler with a saturated acid is of great importance for the Izod strength of the composition

Table 2 does not disclose the particle size of Ti-Pure R104-DD. Therefore, a fair comparison is only possible assuming for the following examination that the particle size is the same as disclosed for of Ti-Pure 104.

Table 2 shows that the surface treatment with saturated acid provides polyamide compositions with better Izod values than the treatment with silane. A comparative example with unsaturated acid or aromatic acid as a surface active agent was not disclosed.

- 2.) The following documents are considered:

D1: US-A-5 827 906 (SEELING RAINER ET AL) 27 October 1998 (1998-10-27)  
D2: GB-A-2 301 105 (BIP PLASTICS LIMITED) 27 November 1996 (1996-11-27)  
D3: US-A-5 412 017 (GAREISS BRIGITTE ET AL) 2 May 1995 (1995-05-02)  
D4: DE 26 59 933 B (KYOWA CHEMICAL INDUSTRY) 30 October 1980 (1980-10-30)  
D5 US-A-3926873

- 2a.) In D1 (Claims, examples,col.3,l.24) a filler, e.g. Ti-oxide, which was surface treated by a fatty acid, is said to be suitable as additive for polyamides in percentual amounts according to the present application. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.
- 2b) In D2 (p.3,paragraph 2-p.4,paragraph 3; Cls. 1,6,7) polyamide compositions

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US00/04105

comprising filler, e.g. Mg-hydroxide and a Ca-stearate in amounts according to the present application are disclosed. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.

- 2c) In D3 (col.2,I.66-col.3,I.14; Cl.1) polyamide compositions comprising mineral fillers and a fatty acid or a fatty acid salt in amounts according to the present application are disclosed. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.
- 2d) In D4 (ex.5) "Nylon 6"- compositions comprising mineral fillers and a fatty acid or a fatty acid salt in amounts according to the present application are disclosed. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.
- 2e) In D5, which clearly concerns the technical problem underlying the present application (see col.1,II.53-56), which consists in providing compositions with improved Izod strength, polyamide compositions comprising fillers having an average particle size of 0,01 to 50 (micro)m according to the present application are disclosed (col.2,I.47-col.3,I.6; col.43-47; Tables 11,12,13).

3.) Assessment of novelty and inventive step for Cls.1and 11:

- 3a) first approach: D1-D4 is considered closest prior art

Novelty can be acknowledged as pointed out above. If a person skilled in the art starting from one of the documents D1-D4 wanted to provide further filler containing polyamide compositions it seems an obvious solution to try compositions comprising nylon 6, a fatty acid (salt) as disclosed in D1-D4 and fillers of a specified aspect ratio and and a specified particle size, which is not explicitly disclosed in D1-D4, but which is known from D5 to be suitable to provide compositions with improved Izod strength .

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

---

International application No. PCT/US00/04105

The further distinguishing features of dependent Claims 2-10 and 12-17 cannot support an inventive step, because they are arbitrarily selected and not related to a surprising technical effect.

3b) second approach: considering D5 as closest prior art:

Present Cls. 1 and 11 differ from D5 in the agent, which is used for the surface treatment. In D5 a filler is reacted with an unsaturated acid or aromatic carboxylic acid.

A technical effect caused by the distinguishing feature in view of D5 was neither stated nor proved.

Starting from D5 the technical problem underlying the present application consisted in providing further polyamide compositions comprising a surface treated filler. This problem was solved in an obvious way by trying fillers having the same particle size as disclosed in D5 and using a well-known surface treatment agent, which is known from D1, but which is not explicitly disclosed in D5.

Therefore present Cls.1 and 11 lack an inventive step in view of D5.

The further distinguishing features of dependent Claims 2-10 and 12-17 cannot support an inventive step, because they are arbitrarily selected and not related to a surprising technical effect.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>CL1375PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 00/ 04105</b>	International filing date (day/month/year) <b>18/02/2000</b>	(Earliest) Priority Date (day/month/year) <b>19/02/1999</b>
Applicant <b>E.I. DU PONT DE NEMOURS AND COMPANY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of **3** sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
  - contained in the international application in written form.
  - filed together with the international application in computer readable form.
  - furnished subsequently to this Authority in written form.
  - furnished subsequently to this Authority in computer readable form.
  - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2.  **Certain claims were found unsearchable** (See Box I).

3.  **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT 00/04105

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 C08K9/04 C08K13/04

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 827 906 A (SEELING RAINER ET AL) 27 October 1998 (1998-10-27) column 3, line 24; claims; examples ---	1-17
X	GB 2 301 105 A (BIP PLASTICS LIMITED) 27 November 1996 (1996-11-27) page 3, paragraph 2 -page 4, paragraph 3; claims 1,6,7 ---	1,6,7, 11,14,16
X	US 5 412 017 A (GAREISS BRIGITTE ET AL) 2 May 1995 (1995-05-02) column 3, line 5 - line 13; claim 1 ---	1,6,7, 11,14,16
X	DE 26 59 933 B (KYOWA CHEMICAL INDUSTRY) 30 October 1980 (1980-10-30) example 5 ---	1,11 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

28 June 2000

04/07/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Boeker, R

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/00/04105

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 926 873 A (AISHIMA ITSUHO ET AL) 16 December 1975 (1975-12-16) cited in the application claims ---	1-17
A	US 4 795 768 A (ANCKER FRED H ET AL) 3 January 1989 (1989-01-03) cited in the application claims -----	1-17

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT [REDACTED] 00/04105

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5827906	A	27-10-1998	AT 184301 T AU 4940996 A CA 2209894 A CN 1175967 A CZ 9702632 A DE 59603002 D WO 9626240 A EP 0811035 A ES 2137673 T FI 973435 A HU 9801875 A JP 11501686 T NO 973860 A PL 322009 A SK 112097 A	15-09-1999 11-09-1996 29-08-1996 11-03-1998 17-12-1997 14-10-1999 29-08-1996 10-12-1997 16-12-1999 21-08-1997 30-11-1998 09-02-1999 22-08-1997 05-01-1998 14-01-1998
GB 2301105	A	27-11-1996	NONE	
US 5412017	A	02-05-1995	DE 4312752 A AT 159967 T DE 59404500 D EP 0621304 A ES 2108320 T JP 7003151 A	27-10-1994 15-11-1997 11-12-1997 26-10-1994 16-12-1997 06-01-1995
DE 2659933	B	30-10-1980	JP 1688524 C JP 52115799 A JP 63048809 B JP 51140946 A JP 52016735 B CA 1090537 A DE 2624065 A FR 2314892 A GB 1514081 A US 4098762 A US 4145404 A	11-08-1992 28-09-1977 30-09-1988 04-12-1976 11-05-1977 02-12-1980 16-12-1976 14-01-1977 14-06-1978 04-07-1978 20-03-1979
US 3926873	A	16-12-1975	JP 892693 C JP 48101436 A JP 51003342 B JP 915696 C JP 49001656 A JP 50035545 B JP 824964 C JP 48072097 A JP 51001239 B JP 824965 C JP 48067195 A JP 51001240 B JP 826814 C JP 48067199 A JP 50040399 B JP 885870 C JP 48067339 A JP 51011653 B JP 824966 C JP 48067340 A JP 51000983 B	24-12-1977 20-12-1973 02-02-1976 21-07-1978 09-01-1974 17-11-1975 16-08-1976 28-09-1973 14-01-1976 16-08-1976 13-09-1973 14-01-1976 31-08-1976 13-09-1973 24-12-1975 12-10-1977 14-09-1973 13-04-1976 16-08-1976 14-09-1973 13-01-1976

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/00/04105

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3926873	A	JP 901642 C JP 49060343 A JP 52032381 B BE 792985 A CA 1009784 A DE 2262126 A FR 2169832 A GB 1416340 A IT 974740 B NL 7217207 A, B,	15-03-1978 12-06-1974 20-08-1977 16-04-1973 03-05-1977 05-07-1973 14-09-1973 03-12-1975 10-07-1974 22-06-1973
US 4795768	A 03-01-1989	US 4661537 A AT 115986 T AT 115987 T CA 1289294 A DE 3650178 D DE 3650178 T DE 3650179 D DE 3650179 T EP 0209085 A EP 0401870 A EP 0401871 A JP 62015245 A	28-04-1987 15-01-1995 15-01-1995 17-09-1991 02-02-1995 18-05-1995 02-02-1995 18-05-1995 21-01-1987 12-12-1990 12-12-1990 23-01-1987

PATENT COOPERATION TREATY

RECEIVED

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

JUN 16 2001

To:

COTREAU, William  
DUPONT DOW ELASTOMERS L.L.C.  
1007 Market Street  
Wilmington, Delaware 19898  
ETATS-UNIS D'AMERIQUE

PCT PATENT RECORDS  
CENTER

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing (day/month/year)	08.06.2001
-------------------------------------	------------

Applicant's or agent's file reference CL1375PCT	IMPORTANT NOTIFICATION	
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International application No. PCT/US00/04105	International filing date (day/month/year) 18/02/2000	Priority date (day/month/year) 19/02/1999
---	--	--

Applicant E.I. DU PONT DE NEMOURS AND COMPANY et al.
---

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/	Authorized officer
---------------------------------------	--------------------

European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 pmu d Fax: +49 89 2399 - 4465	Connolly, M
--	-------------

Tel.+49 89 2399-8021

REY NOTED



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference CL1375PCT	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US00/04105	International filing date (day/month/year) 18/02/2000	Priority date (day/month/year) 19/02/1999	
International Patent Classification (IPC) or national classification and IPC C08K9/04			
Applicant E.I. DU PONT DE NEMOURS AND COMPANY et al.			

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- I     Basis of the report
- II     Priority
- III     Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV     Lack of unity of invention
- V     Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI     Certain documents cited
- VII     Certain defects in the international application
- VIII     Certain observations on the international application

Date of submission of the demand 30/08/2000	Date of completion of this report 08.06.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Feldmann, G Tel. phone No. +49 89 2399 8300



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/04105

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-19                   as originally filed

**Claims, No.:**

1-17                   as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
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- filed together with the international application in computer readable form.
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4. The amendments have resulted in the cancellation of:

- the description,       pages:
- the claims,           Nos.:
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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/04105

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims 1-17
	No:	Claims
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-17
Industrial applicability (IA)	Yes:	Claims 1-17
	No:	Claims

2. Citations and explanations  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US00/04105

1.) In the examples and comp. examples of the application mineral fillers are merely characterized by their trade names, the "aspect ratio" and the "equivalent spherical diameter" are not specified. Therefore, it is not clear, if the fillers fall under the definition of the fillers as presently claimed.

In Tables 4 and 6 the applicant proved that the particle size is of great importance to provide compositions with high Izod values. In Table 2 he proved that the treatment of the filler with a saturated acid is of great importance for the Izod strength of the composition

Table 2 does not disclose the particle size of Ti-Pure R104-DD. Therefore, a fair comparison is only possible assuming for the following examination that the particle size is the same as disclosed for of Ti-Pure 104.

Table 2 shows that the surface treatment with saturated acid provides polyamide compositions with better Izod values than the treatment with silane. A comparative example with unsaturated acid or aromatic acid as a surface active agent was not disclosed.

2.) The following documents are considered:

D1: US-A-5 827 906 (SEELING RAINER ET AL) 27 October 1998 (1998-10-27)  
D2: GB-A-2 301 105 (BIP PLASTICS LIMITED) 27 November 1996 (1996-11-27)  
D3: US-A-5 412 017 (GAREISS BRIGITTE ET AL) 2 May 1995 (1995-05-02)  
D4: DE 26 59 933 B (KYOWA CHEMICAL INDUSTRY) 30 October 1980 (1980-10-30)  
D5 US-A-3926873

2a.) In D1 (Claims, examples,col.3,l.24) a filler, e.g. Ti-oxide, which was surface treated by a fatty acid, is said to be suitable as additive for polyamides in percentual amounts according to the present application. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.

2b) In D2 (p.3,paragraph 2-p.4,paragraph 3; Cls. 1,6,7) polyamide compositions

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US00/04105

comprising filler, e.g. Mg-hydroxide and a Ca-stearate in amounts according to the present application are disclosed. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.

- 2c) In D3 (col.2,I.66-col.3,I.14; Cl.1) polyamide compositions comprising mineral fillers and a fatty acid or a fatty acid salt in amounts according to the present application are disclosed. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.
- 2d) In D4 (ex.5) "Nylon 6"- compositions comprising mineral fillers and a fatty acid or a fatty acid salt in amounts according to the present application are disclosed. Present Cls. 1 and 11 differs from D1 in the aspect ratio and equivalent spherical diameter. A technical effect caused by the said distinguishing features was neither stated nor proved.
- 2e) In D5, which clearly concerns the technical problem underlying the present application (see col.1,II.53-56), which consists in providing compositions with improved Izod strength, polyamide compositions comprising fillers having an average particle size of 0,01 to 50 (micro)m according to the present application are disclosed (col.2,I.47-col.3,I.6; col.43-47; Tables 11,12,13).

**3.) Assessment of novelty and inventive step for Cls.1and 11:**

- 3a) first approach: D1-D4 is considered closest prior art

Novelty can be acknowledged as pointed out above. If a person skilled in the art starting from one of the documents D1-D4 wanted to provide further filler containing polyamide compositions it seems an obvious solution to try compositions comprising nylon 6, a fatty acid (salt) as disclosed in D1-D4 and fillers of a specified aspect ratio and and a specified particle size, which is not explicitly disclosed in D1-D4, but which is known from D5 to be suitable to provide compositions with improved Izod strength .

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/04105

The further distinguishing features of dependent Claims 2-10 and 12-17 cannot support an inventive step, because they are arbitrarily selected and not related to a surprising technical effect.

3b) second approach: considering D5 as closest prior art:

Present Cls. 1 and 11 differ from D5 in the agent, which is used for the surface treatment. In D5 a filler is reacted with an unsaturated acid or aromatic carboxylic acid.

A technical effect caused by the distinguishing feature in view of D5 was neither stated nor proved.

Starting from D5 the technical problem underlying the present application consisted in providing further polyamide compositions comprising a surface treated filler. This problem was solved in an obvious way by trying fillers having the same particle size as disclosed in D5 and using a well-known surface treatment agent, which is known from D1, but which is not explicitly disclosed in D5.

Therefore present Cls.1 and 11 lack an inventive step in view of D5.

The further distinguishing features of dependent Claims 2-10 and 12-17 cannot support an inventive step, because they are arbitrarily selected and not related to a surprising technical effect.